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Attorney Docket
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| Applicants | : | Denis Courtemanche | |
| Serial No. | : | 10/772,421 | Art Unit : 3617 |
| Filed | : | February 6, 2004 | Examiner : Not Yet Assigned |
| For | : | ENDLESS TRACK FOR A TRACK PROPELLED VEHICLE | |

**CLAIM FOR PRIORITY UNDER 35 U.S.C. §119**

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir :

The above-referenced patent application claims priority benefit from the foreign patent application listed below:

**Application No. 2,418,556, filed in CANADA on February 6, 2003.**

In support of the claim for priority, attached is a certified copy of the Canadian priority application.

Respectfully submitted,
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Date : July 13, 2004

**Office de la propriété intellectuelle du Canada**
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# *Bureau canadien des brevets*
*Certification*

# *Canadian Patent Office*
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La présente atteste que les documents ci-joints, dont la liste figure ci-dessous, sont des copies authentiques des documents déposés au Bureau des brevets.

This is to certify that the documents attached hereto and identified below are true copies of the documents on file in the Patent Office.

Specification and Drawings, as originally filed, with Application for Patent Serial No: **2,418,556**, on February 6, 2003, by **CAMOPLAST INC.**, assignee of Denis Courtemanche, for "Endless track for a Track Propelled Vehicle".

Agent certificateur/Certifying Officer

May 3, 2004
Date

Canada

(CIPO 68)
04-09-02

OPIC CIPO

## ABSTRACT

The ground engaging outer side of an endless track of a track propelled vehicle displays a series of longitudinally spaced profiles which are defined by a central portion and two opposite lateral portions; the rubber material of the lateral portions of the body has a hardness which is greater than the hardness of the rubber material of the central portion of the body.

## TITLE OF THE INVENTION

ENDLESS TRACK FOR A TRACK PROPELLED VEHICLE

## FIELD OF THE INVENTION

The present invention pertains to the construction of an endless track for a track propelled vehicle.

## BACKGROUND OF THE INVENTION

Endless tracks for track propelled vehicles are well known. They essentially consist of an endless body made of reinforced rubber material wherein the ground engaging outer side of the body is formed of a series of longitudinally spaced profiles. Endless tracks mounted on snowmobiles are usually provided with a series of longitudinally spaced embedded rods to reinforce the rubber material. However, on other vehicles such as vehicles which are driven on snow or grounds that would not adequately support wheels, endless tracks, which are usually of smaller width than that found on snowmobiles, are provided without the presence of reinforcing rods as indicated above.

In Canadian patent application 2,319,934 filed September 18, 2000 in the name of Soucy *et al.*, there is provided a rubber band track with various hardnesses. However, the track described is characterized by a central portion made of rubber material having a hardness which is greater than the hardness of the rubber material in the opposite lateral band portions of the body.

However, it has been noted that some resiliency is needed in the central portion for the wheels which bear on the inner surface of the endless track.

## STATEMENT OF THE INVENTION

The present invention is therefore concerned with providing an endless track for a track propelled vehicle which overcomes the above-described problem.

This is achieved by providing an endless track for a track propelled vehicle which comprises a body made of a reinforced rubber material, the body having a ground-engaging outer side on which are disposed a series of longitudinally spaced profiles, and an inner side; the body defines a laterally extending central portion and two opposite lateral portions; the track is characterized in that the rubber material of the lateral portions of the body has substantially a hardness which is greater than the hardness of the rubber material of the central portion.

In one form of the invention, the rubber material of the lateral portions of the body has an average hardness of between about 75 and about 90 duro A.

In another form of the invention, the rubber material of the central portion of the body has an average hardness of between about 55 and about 75 duro A.

Objects and further scope of applicability of the present invention will become apparent from the detailed description given hereinafter. It should be understood, however, that this detailed description, while indicating preferred embodiments of the invention, is given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of a portion of a track made in accordance with the present invention;

Figure 2 is a cross-sectional view taken along lines 2-2 of figure 1; and

Figure 3 is a cross-sectional view taken along lines 3-3 of figure 1.

## DETAILED DESCRIPTION

Referring to figure 1, there is shown a portion 10 of an endless track made in accordance with the present invention. The track is formed of molded reinforced rubber material, the construction of which is well known in the art and need not be described in detail herein.

The track has an inner side 12 which displays a series of longitudinally spaced drive lugs 13 for engagement with drive wheels (not shown) associated with the suspension assembly of track-propelled vehicles, and an outer side 14 which displays a series of longitudinally spaced laterally extending profiles 16, 18 and 20, preferably of identical configuration.

Each profile 16 has a central region 16' and opposite lateral band portions 16". The central region 16' has a constant height while the opposite lateral portions 16" are stepped to the opposite side edges 17 of the track.

The present invention is concerned with making the central region 16' of a rubber material having a hardness which is less than the hardness of the rubber material of the lateral portions 16" of the body. However, it has been found that, during the molding process, the soft rubber material will somewhat flow to the lateral portions so that references X and Y represent substantially the respective areas of soft and hard rubber material which, in practice, are present in the finished track.

In one form of the invention, the rubber material of the lateral portions of the body or in areas Y has an average hardness of between about 75 and about 90 duro A, preferably 80 duro A.

In another form of the invention, the rubber material of the central portion, or area X, of the body has an average hardness of between about 55 and about 75 duro A, preferably 60 duro A.

Although the invention has been described above with respect to one specific form, it will be evident to a person skilled in the art that it may be modified and refined in various ways. It is therefore wished to have it understood that the present invention should not be limited in scope, except by the terms of the following claims.

## CLAIMS

1. An endless track for a track propelled vehicle, comprising a body made of a reinforced rubber material, the body having a ground-engaging outer side on which are disposed a series of longitudinally spaced profiles, and an inner side; said body defining a laterally extending central portion and two opposite lateral portions; said track being characterized in that the rubber material of said lateral portions of said body has substantially a hardness which is greater than the hardness of the rubber material of the central portion of said body.

2. An endless track according to claim 1, characterized in that the rubber material of the lateral portions of the body has an average hardness of between about 75 and about 90 duro A.

3. An endless track according to claim 1, characterized in that the rubber material of said lateral portions of the boby has an average hardness of about 80 duro A.

4. An endless track according to claim 1, characterized in that the rubber material of said central portion of the body has an average hardness of between about 55 and about 75 duro A.

5. An endless track according to claim 1, characterized in that the rubber material of the central portion of the body has an average hardness of about 60 duro A.

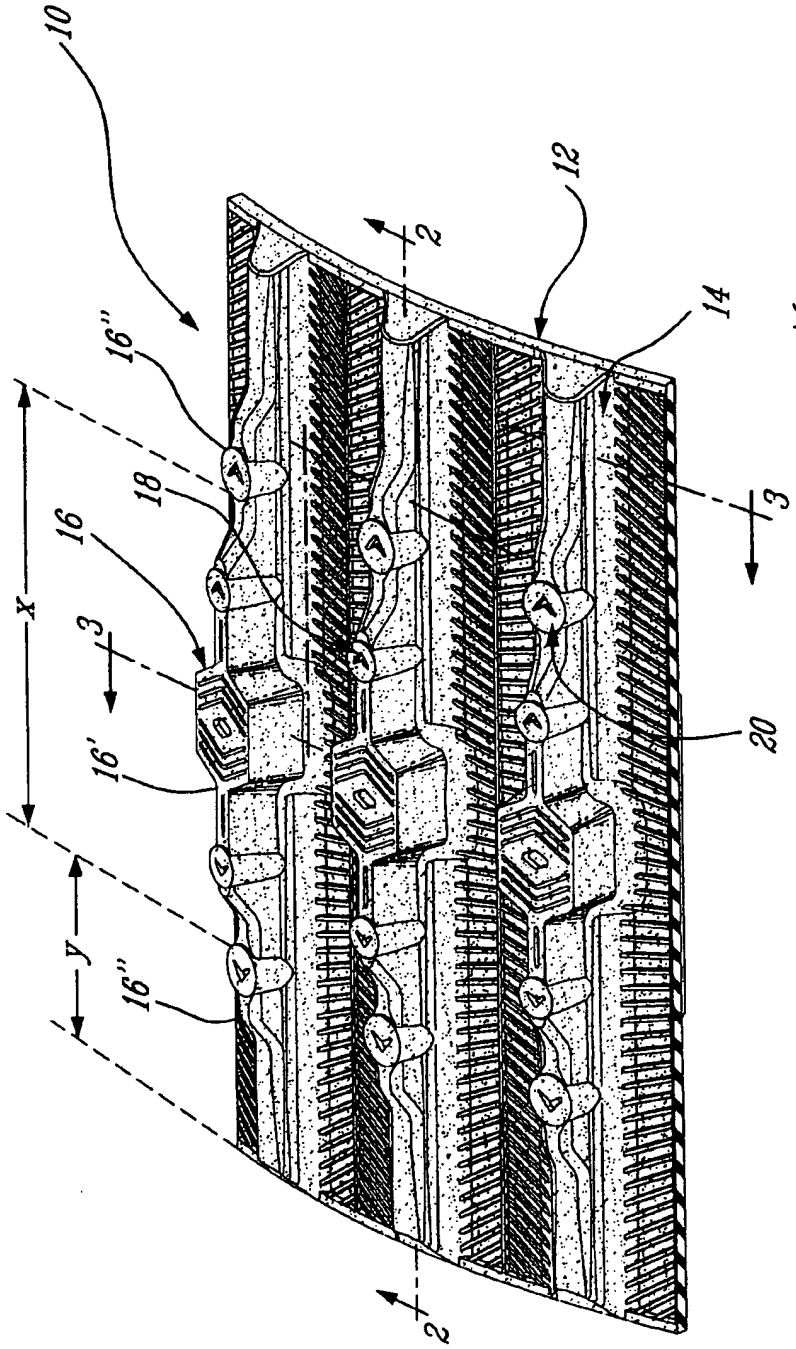


fig. 1

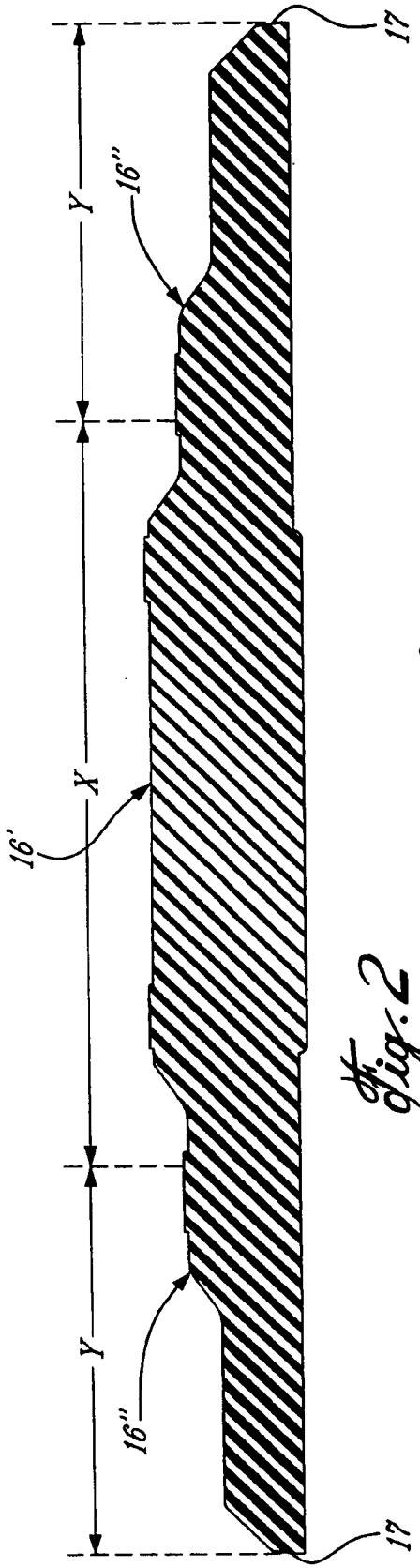


Fig. 2

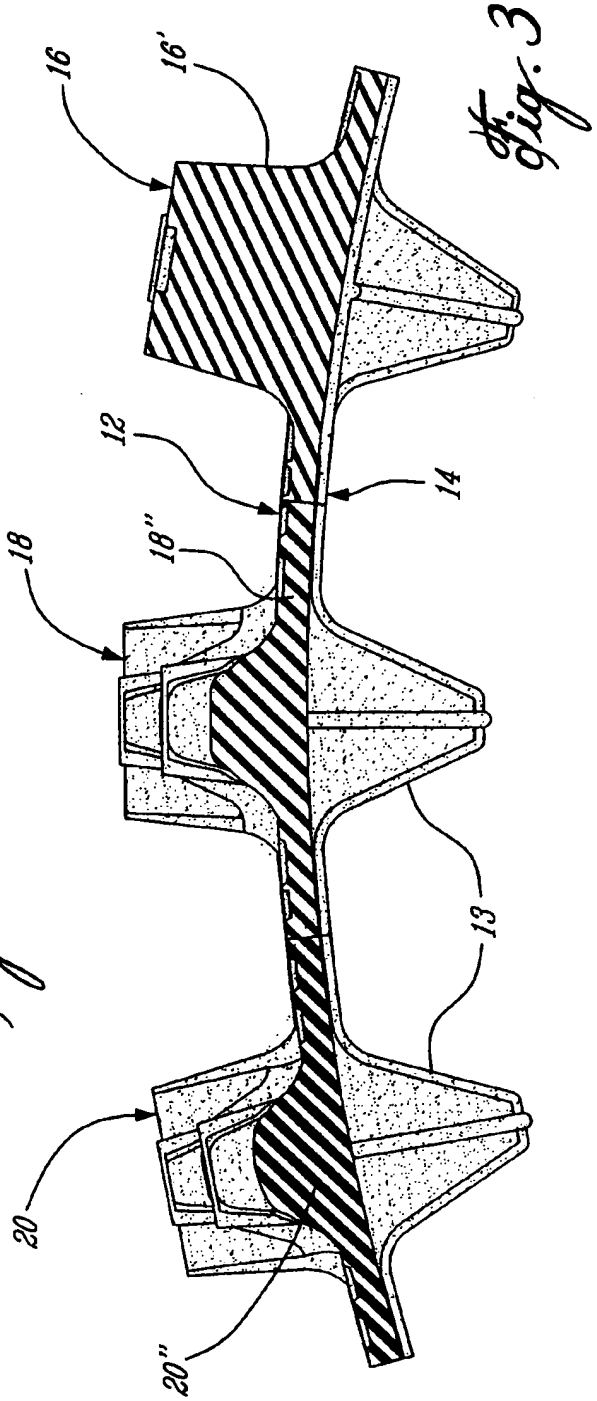


Fig. 3